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NorthEast Under/graduate Research Organization for Neuroscience (NEURON): Our Third New York City Meeting

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The NorthEast Under/graduate Research Organization for Neuroscience (N.E.U.R.O.N.) promotes preparation, education, and undergraduate research in Neuroscience. The N.E.U.R.O.N. Conference was initially held at undergraduate institutions primarily in New England. Then, for the previous two years, to broaden its impact and increase diversity, the meeting moved to Hunter College, CUNY, New York. This year represents the first year in which two N.E.U.R.O.N. meetings were held, one in Boston and one in New York City.

The following is a report of the New York City meeting which was held at Hunter College on April 28, 2007. Eminent Neuroscientist, Dr. Carol Sue Carter, of the University of Illinois at Chicago, delivered the keynote address. The meeting also included the second bestowal of the Suzannah Bliss Tieman Research Awards for outstanding poster presentations and a workshop aimed at increasing minority participation in Neuroscience research. These highlights and future plans for N.E.U.R.O.N. are discussed.

The discipline of Neuroscience has become a formal part of the lexicon of academia: Neuroscience, as a field of study, is now listed along with the traditional subjects of anatomy, physiology, biology, biochemistry, cell pharmacology and psychology, from which this truly interdisciplinary field draws its diverse heritage. As the field has matured, there has been an increase in the number of Neuroscience programs (Cleland, 2002) at institutions of all levels. Interestingly, liberal arts colleges and master's level colleges and universities account for 44% of all degrees awarded in the natural sciences and agriculture (National Science Board, 2004).

An indicator that the field has reached the status of a discipline in its own right is the number of specialized Neuroscience training programs listed on the Association of Neuroscience Departments and Programs website (www.andp.org). Currently, listed are 40 undergraduate and over 100 graduate Neuroscience programs.

The generally accepted two-pronged directive to promote inquiry based scientific education interdisciplinary study (National Research Council, 2002) for the advancement of science education at all levels may facilitate the inclusion of Neuroscience programs at the undergraduate level (Ramirez, 2007). In 1996, Drs. Cheryl Frye (Connecticut College), Priscilla Kehoe (Trinity College), and Cheryl McCormick (Bates College) came together at the Neuroscience Education Training Conference held at Trinity College and began to formulate the N.E.U.R.O.N. concept. In its inception, NEURON was meant to provide a forum where faculty and students from predominantly undergraduate institutions (PUIs) could collaborate, network and learn from each other (Frye and Edinger, 2004). They recognized that the opportunity to provide such a venue lie in their proximity to each other and in the density of schools with neuroscientists and/or fledgling neuroscience programs within the Northeast.

N.E.U.R.O.N. was envisioned as an organization that would bring together faculty, graduate and undergraduate students from nearby colleges and universities (1) to provide a forum for undergraduate and graduate students to present their research while learning from other teams engaged at the most advanced levels in additional areas of neuroscience research and (2) to provide an assembly at which faculty could collaborate on and discuss issues regarding training and research. Since then, N.E.U.R.O.N. has evolved to reflect the rapid pace of advancement in the field, meet the needs of neuroscientists-in-training from a broader range of institutions and provide these opportunities to a wider and more diverse population.

2007 HIGHLIGHTS – HUNTER, CUNY

Participants - Hunter- CUNY, 2007

Initial registration data presented herein were obtained via the N.E.U.R.O.N. website (www.albany.edu/neuron) and on-site registration forms. These data indicate that this meeting included 360 undergraduate students, 82 graduate students, 23 high school students, and 79 faculty members (Table 1). There were 108 poster presentations over two poster sessions, which covered topics ranging from effects of mood on attentional processes, the effects of antidepressants on sexual motivation of female rats and steroid hormone effects on learning and anxiety, among many others. Poster presenters hailed from a number of colleges in the area including, College of Saint Rose, Hartwick College and Skidmore College. There were also representatives from larger universities such as, The University at Albany-SUNY, Sacred Heart University, and Drew University. Representatives from outside the state included members of Stonehill College in Massachusetts and Fairfield College in Connecticut.

To provide assessment and chart our progress toward

meeting our goal of enhancing the diversity of N.E.U.R.O.N., every participant is asked to fill out a survey at the conclusion of the meeting and to provide demographic information. The collection of these data was approved by the Stonehill College IRB. There were 117 respondents to the survey at this year's New York City meeting. Female faculty made up about half (51%) of the faculty attendees at the meeting, while student attendees were predominantly female (80%). This year's New York City meeting brought us closer to our goal of enhancing racial and ethnic diversity with 21% of faculty and 52% of students reporting minority status. More than half of the student participants (61%) reported that they receive some form of financial aid in order to continue their education, 30% benefit from work study, and 35% of students have an outside job to help pay for their education. Hence, we are moving closer toward our goal to broaden the accessibility of the opportunities afforded by N.E.U.R.O.N. to increasing numbers of faculty and to trainees from more diverse backgrounds.

Suzannah Bliss Tieman Research Awards

The second bestowal of the Suzannah Bliss Tieman Research Awards occurred at this year's New York City meeting. The awards are meant to highlight research presentations that emphasize the ideals that Dr. Tieman espoused in her 30-year career at The University at Albany-SUNY. For many, Dr. Tieman played a critical role not only at the undergraduate and graduate level but also throughout their careers. To acknowledge her dedication to this aspect of Neuroscience training, an award for junior faculty was added to this meeting and, at subsequent meetings, Lifetime Achievement Awards will be presented.

The judges at this meeting included former colleagues of Dr. Tieman, as well as the two past award recipients, Jason Paris (The University at Albany-SUNY) and Sean Nash (Skidmore College).

The undergraduate recipient of the Suzannah Bliss Tieman Research Award was Carolyn Koonce from The University at Albany-SUNY for her poster entitled "Estrogen Receptor Beta may be Required for Estradiol's Anti-Anxiety Effects in Adult Female Mice." Ms. Koonce's research investigated the extent to which actions at specific estrogen receptor isoforms are involved in mediating anti-anxiety effects of estradiol in estrogen receptor knockout mice. Ms. Koonce's research took place in collaboration with graduate student, Alicia Walf.

Alicia Walf, a doctoral candidate at the University at Albany-SUNY, was the graduate student recipient of the Suzannah Bliss Tieman Research Award. Ms. Walf's presentation, part of the Learning and Memory symposium (see below), was entitled "The Role of Estrogen Receptor Beta for Steroids' Effects on Learning and Memory."

Dr. Madeline Rhodes (Skidmore College) was the first recipient of the Suzannah Bliss Tieman Research Award for junior faculty. Dr. Rhodes' presentation, entitled "3α-Diol Attenuates Phenytoin-Induced Deficits in Reproductive Behavior of Male Rats" was the culmination of research investigating the effects and putative mechanisms of various classes of anti-epileptic drugs on reproductive and neuroendocrine function in male rats. These studies, were carried out with several undergraduates across a number of departments and disciplines at Skidmore College including: Joshua Brahen (Psychology), Matthew Isakson (Biology), James Ferber (Neurosicence), Michael Goldberg (Neuroscience), Lisa Krug (Neuroscience), Sean Nash (Neuroscience), Ian Pollock (Neuroscience), Carolyn Seiden (Neuroscience), and Jeffrey Vickers (Chemistry). Dr. Rhodes was also a student of Dr. Tieman and as such strives to pass on the lessons that she learned to the next generation of Neuroscience trainees.

Keynote Address

N.E.U.R.O.N. has been very fortunate to procure highly sought after, immensely respected keynote speakers who are leaders in their field. Continuing in this tradition, Dr. Carol Sue Carter (Department of Psychiatry, University of Illinois at Chicago) presented the keynote address entitled "The love code: Implications for autism." Evaluations of Dr. Carter's talk were very positive. In particular, participants commented on Dr. Carter's fresh approach.

Dr. Carter immediately engaged students by beginning with the question "What is love?" She then presented some of her ground-breaking research to explain that certain

YEAR	UNDERGRADS	GRAD	FACULTY	HIGH SCHOOL	HIGH SCHOOL	PRESENTATIONS
		STUDENTS		STUDENTS	TEACHERS	
1997	43	40	35			58
1998	62	52	41			66
1999	80	30	19			54
2000	62	52	41			68
2001	72	27	31			52
2002	81	24	33			49
2003	79	18	31			56
2004	75	19	42			60
2005	323	76	67	25		116
2006	225	77	65	15		110
2007, Boston	72	23	19	6	3	42
2007,	360	82	79	23	2	108
NYC						

Table 1. Participants at N.E.U.R.O.N. Conferences

aspects of what we might define as "love" such as bonding and attachment have behavioral correlates that can be independently measured.



Figure 1. Dr. Carol Sue Carter presenting her keynote.

In presenting this, Dr. Carter summarized her seminal work with socially monogamous prairie voles, which have become a standard animal model for the study of the role of oxytocin in social bonds. Dr. Carter's work along with that of others has demonstrated that oxytocin plays a critical role in the formation of social bonds, parental care, and stress responsiveness. The establishment of these behaviors has an interesting developmental component in that the manipulation of oxytocin early in development can alter the formation of social bonds in adulthood. example, there is a dose-dependent effect of oxytocin exposure on postnatal day 1 on partner preference in adulthood, such that moderate doses of oxytocin facilitate partner preference while high doses inhibit partner preference (Bales et al., 2007).

This framework is serving as the foundation for an additional line of research aimed at elucidating mechanisms that may underlie autism and other related disorders. Autism is characterized by atypical social behaviors and reactions to stressful situations and is also 4-5 times more prevalent in males than females. Given that oxytocin appears to play an important role in social behaviors, which can be sexually dimorphic, Dr. Carter's current hypothesis is that oxytocin may protect against disorders involving sociality (Carter, 2007). In this line of research, Dr. Carter focuses on the interplay of vasopressin, oxytocin, and testosterone to understand disorders characterized by atypical social behaviors.

Symposia/Workshops

Neuroscientific Studies of Learning and Memory: Dr. Robert Flint (College of Saint Rose) chaired a symposium on Learning and Memory, which included presentations by six Neuroscience trainees. Christina Marino (College of Saint Rose) presented work from a project examining the role of protein synthesis on memory reconsolidation. Tonya Yager (Hartwick College) discussed cyclical relationships between alcohol intake and hippocampal damage. Martia LaManna and Melanie Gilmore (Sacred Heart University) presented findings from their examination of the differential effects of stressors on anxiety and cognition. Sean Nash (Skidmore College) discussed findings from a project investigating effects of anti-epileptic drugs on memory and neuroendocrine processes. Alicia Walf (The University at Albany-SUNY) presented data about the role of estrogen receptor beta in mediating learning and memory. We hope to continue to expand the number of symposia at which students have the opportunity to deliver oral presentations.

Enhancing Minority Participation in Neuroscience Research: Dr Susan Croll (Queens College) led a workshop geared towards increasing awareness of, and participation in, Neuroscience research for underrepresented individuals. The panelists for this workshop included three minority undergraduate students: Carolyn Koonce, Hope Osariemen, and Harold Levi Gomes, each with varying experiences in obtaining Neuroscience research opportunities. Two of the students were American students, but one had received funding specifically for minority students and one was supported with more general, all-purpose funds. The third student came from Africa to study in the United States and was supported by funds for minority students.

The question and answer format allowed for a productive conversation. It created an opportunity to discuss factors that may influence awareness of and/or access to opportunities in neuroscience. In addition, the workshop provided an opportunity for three minority students to showcase their experience as Neuroscience trainees.

N.E.U.R.O.N.'S IMPACT: DIVERSITY, PSYCHOLOGY AND GEOGRAPHY DIVERSITY

At the N.E.U.R.O.N. conference neuroscientists-in-training typically present their research, interact with other trainees during a poster session, participate in a workshop designed to be topical for trainees, listen to an outstanding keynote address and interact with faculty from schools other than their own. These can be important experiences for the development of one's career. In addition, N.E.U.R.O.N. has a history of showcasing keynote speakers and workshop leaders who represent a diverse group of Neuroscientists. Of 12 keynote speakers to date, five have been prominent women Neuroscientists (Table Workshop leaders have also been predominantly women (Table 3). A number of these speakers are also members of racial/ethnic groups that are still underrepresented in Neuroscience. Minority faculty represented 21% of the faculty at this year's New York City N.E.U.R.O.N. meeting, which is an increase over last year's meeting in New York City. Given the formative opportunities offered for trainees at N.E.U.R.O.N and N.E.U.R.O.N.'s tradition of procuring outstanding tvpically neuroscientists who are from aroups underrepresented in Neuroscience, it seemed appropriate that N.E.U.R.O.N. should begin to actively promote the participation of trainees from (ethnic/racial/sex/socio-economic) still underrepresented in Neuroscience. To do this, the location of the meeting was changed to Hunter College, CUNY, in New York

YEAR	SPEAKER	AFFILIATION	TITLE
1997	Dr. Bruce McEwen	Rockefeller University	"Sex, stress, and synapses: Endocrinology and Neuroscience combine forces"
1998	Dr. Pat Goldman- Rakic	Yale University	"Cortical memory systems"
1999	Dr. Robert Sapolsky	Stanford University	"Stress, neurodegeneration, and individual differences"
2000	Dr. Sandra Witelson	McMaster University	"Einstein and other brains"
2001	Dr. Ed Kravitz	Harvard Medical School	"Fighting lobsters: from genes to behavior"
2002	Dr. Donald Pfaff	Rockefeller University	"Hormonal and genetic influences on arousal of the brain, sexual and otherwise"
2003	Dr. Eve Marder	Brandeis University	"Stability and plasticity in adult and developing neural circuits"
2004	Dr. Huda Akil	University of Michigan	"Searching for the neural basis of mental illness"
2005	Dr. Joseph LeDoux	New York University	"Emotions, memory, and the brain"
2006	Dr. Edwin Lephart	Brigham Young University	"Phytoestrogens: Brain, hormones, and behavior. What's in your laboratory diet?"
2007, Boston	Dr. Erich D. Jarvis	Duke University	"The neurobiology of vocal learning"
2007, NYC	Dr. Carol Sue Carter	University of Illinois at Chicago	"The love code: Implication for autism"

Table 2. Keynote Addresses by Distinguished Neuroscientists

City. This change was implemented two years ago and this year represents a shift to a two-meeting model. Moving forward, the Fall meeting will be held at an academic institution in Boston (alternating between Simmons College and Northeastern University) and the Spring meeting will be held at Hunter College, CUNY, in New York City. Boston and New York City are more easily accessible via multiple modes of transportation than many small New England college towns. These two changes (moving to a two-meeting model and holding each meeting in a large city) have had the desired effect of increasing the diversity of participants at N.E.U.R.O.N. (Table 4).

Psychology

Another way in which N.E.U.R.O.N. has expanded its impact is by bringing the discipline of Neuroscience to non-Neuroscientists. Pairing N.E.U.R.O.N. with the Psychology Convention at Hunter College provides an opportunity to expose the many psychology students and faculty who attend the Psychology Convention to Through posters, short-talks and Neuroscience. outstanding keynote addresses, holding N.E.U.R.O.N. in conjunction with the Psychology Conference allows students and faculty to be exposed to current techniques and emerging theoretical frameworks specifically within Neuroscience.

Geography

The establishment of groups around the country that have partially modeled themselves on N.E.U.R.O.N. is exciting and suggests the merit of the N.E.U.R.O.N. concept. One such meeting is Symposium for Young Neuroscientists and Professors of the Southeast (SYNAPSE), which is currently organized by Drs. Barbara Lom and Julio Ramirez of Davidson College (Talley et al., 2003). More recently, the MidBrains Undergraduate Neuroscience Conference of the Upper

Midwest has been organized by Dr. Eric Wiertelak from Macalester College. MidBrains held their first meeting at Macalester College on April 28, 2007. In addition, there are plans to develop a meeting similar to N.E.U.R.O.N. on the West Coast. Thus, the impact of N.E.U.R.O.N. extends beyond the traditional student and beyond the geographical limits of the Northeast.

INITIATIVES: NEW HONOR SOCIETY, **EXPANDED WEBSITE. BRAIN PRIMERS**

In part, the success and impact of N.E.U.R.O.N. are based on its ability to evolve and implement fresh initiatives. Currently, these include a potential partnership with an appropriate Honor Society, an expansion of the website and the inclusion of "Brain Primers" at the N.E.U.R.O.N. meetings.

Honor Society

The inclusion of an Honor Society Induction Ceremony that would take place at the N.E.U.R.O.N. meeting is being considered. The Psychology Convention which is paired with the New York City meeting hosts a Psi Chi induction ceremony. This may potentially serve as a venue for superlative Neuroscience trainees. We also continue to pursue the possibility of a N.E.U.R.O.N. umbrella membership in Nu Rho Psi, the newly honor Neuroscience established society for undergraduates.

Webpage

In the future, on-line registration for N.E.U.R.O.N. will be linked to additional meeting information. For example, more background information will be provided regarding the focus of each meeting, including links to a review article by the keynote speaker as well as overview presentations for each planned workshop. Additionally, a separate link will provide specific guidance regarding

YEAR	AUDIENCE	SPEAKER(S)	AFFILLIATION	TITLE	
1997	Trainees	Various faculty	Various	Discussion grps on Neuroscience	
	Faculty	Dr. John Mitchell	Boston College	Web resources for Neuroscience	
1998	Trainees	Drs. Fisher & Zigmond	Univ Pittsburgh	Career options in Neuroscience	
	Faculty	Dr. Anabella Segarra	NSF	NSF grant writing	
1999	Trainees	Dr. Jacob Harney	Univ Hartford	Ethics in Neuroscience	
	Faculty	Dr. Betty Zimmerberg	Williams Coll	Web-based teaching resources	
2000	Undergrad	Dr. Jim Stellar	Northeastern University	Five easy steps on how to become a graduate student	
	Graduate	Dr. Cheryl McCormick	Bates College	Life after graduate school	
	Faculty	Dr. Donald Buckley	Quinnipac College	Using educational technology to foster active learning & cognitive enhancement in science	
2001	Undergrad	Dr. Cheryl McCormick	Bates College	So I studied Neuroscience in college, what's next?	
	Graduate	Dr. Jacob Harney	Univ Hartford	So I have a PhD in Neuroscience, what's next?	
	Faculty	Dr. Sarah Raskin	Trinity College	So I know we want to develop our program in Neuroscience, what's next?	
2002	Undergrad	Dr. Cheryl McCormick	Bates College	Post-undergraduate career paths	
	Graduate	Dr. Jacob Harney	Univ of Hartford	Pros & cons of industry vs. academia	
	Faculty	Dr. Betty Zimmerberg	Williams College	Pandering or pedagogy: using multimedia t teach Neuroscience	
2003	Trainees	Dr. Joan King	Beyond Success	Evoke your genius: Unlock your potential	
	Faculty	Dr. Su Tieman	Univ at Albany	Teaching responsible conduct	
2004	Undergrad	Drs. Meg Kirkpatrick & Bob Morris	Wheaton College	Life after college: graduate school and careers in Neuroscience	
	Graduate	Dr. Su Tieman	Univ at Albany	Ethics in Neuroscience	
	Faculty	Dr. Jeff Blaustein	U Mass Amherst	Journal reviews: read (and writing) between the lines	
2005	Undergrad	Dr. Su Tieman	Univ at Albany	Applying to graduate school	
	Graduate	Dr. Cheryl McCormick	Brock Univ	Prospects for PhDs in Neuroscience	
	Faculty	Dr. Sharon Ramos-Goyette	Stonehill College	How to implement an outreach program at your institution	
2006	All	Various	Various	Various	
	Faculty	Drs. Jennifer Swann & Cecilia Fox	Lehigh & Moravian Univ	Increasing diversity in Neuroscience	
2007	High School	Elizabeth Hart, Senior	Simmons	Pre-college workshop: Careers in Neuroscience	
Boston	Undergrad	Dr. Jay McLaughlin	Northeastern	Getting into Grad School	
	Grad/Fac	Dr. Perrin Cohen	Northeastern	Ethics	
2007 NYC	All	Dr. Susan Croll	Queens College	Enhancing minority participation in Neuroscience research	
	All	Various	Various	Neuroscience: Learning & Memory	

Table 3. Workshops at N.E.U.R.O.N. Conferences

successful participation at a scientific meeting ("How to Get the Most from a Scientific Meeting"). This will include such information as how to prepare an effective poster, key questions to expect and ask at poster presentations, and guidelines for productive interactions with senior scientists. Having prior access to specific information about N.E.U.R.O.N. will provide participants the opportunity to better prepare themselves for the meeting and can be used as a tool by educators at the high school and undergraduate level.

High School Brain Primers

Outreach to the broader community has been initiated by involving local high school students and teachers in the meeting with special workshops entitled "Brain Primers." Newly proposed Officer positions within N.E.U.R.O.N. will continue to develop this effort. For example, the "Director of Community Outreach" will expand efforts to forge relationships with high schools particularly working with students from economically and culturally diverse backgrounds. The "Director of Neuroscience Outreach" will introduce younger students and develop Neuroscience Awareness initiatives for the community at large.

THE FUTURE OF N.E.U.R.O.N.

The future of N.E.U.R.O.N. is very promising for a number of reasons. First, we will continue our two-meeting model in 2007-2008. We are in the planning stages for our Spring 2008 meeting in New York City, which will be held again at Hunter College on Saturday, April 12, 2008. The keynote speaker will be Dr. David Rubinow of the University of North Carolina. His talk is entitled "Mood Dysregulation in Context: Lessons from Reproductive Neuroscience." The workshops and symposia will be determined based on feedback form our Fall meeting.

Our Fall meeting was held in Boston and hosted by Dr. Jay McLaughlin at Northeastern University on October 6. 2007. The keynote address entitled "Role of the nucleus

YEAR	% ON FINANCIAL AID	% 1 ST GENERATION STUDENT	% DISABLED	%1 ST GEN IMMIGRANT	% W/ JOB TO PAY FOR SCHOOL	% WORK STUDY
04	66	23	5	10	35	35
05	50	43	2	28	37	18
06	48	34	1	28	41	48
07, Boston	53	45	1	7	27	22
07, NYC	61	47	6	10	35	30

Table 4. Demographic Information of N.E.U.R.O.N. Participants

accumbens CREB in motivated behavior: implications for co-morbidity of addiction and depression" was delivered by Dr. William A. Carlezon, Jr. of Harvard Medical School. At the New York meeting many student participants indicated that a workshop on getting into and being successful in graduate school would be especially helpful. Hence, we had a brown-bag lunch workshop entitled "How to gain entrée and thrive in your post-graduate program of choice." We also offered a workshop entitled, "Neuroscience Opportunities." This workshop was in direct response to the requests of students who participated in the Minority workshop at the Hunter College meeting. More detailed outcomes will be presented once the data from the Fall conference have been analyzed.

Dr. Frye has been at the forefront of N.E.U.R.O.N. since its inception. She was one of its founders, and every year, Dr. Frye organizes each conference, holds a business meeting at each conference and secures funding for the N.E.U.R.O.N. conference which among other things eliminates a registration fee so that all students who are interested may participate, unlimited by financial constraints.

At this meeting, Dr. Frye's trip from Albany to New York City was hampered by engine trouble which caused a change in programming. Dr. Frye planned on introducing Dr. Carter and providing an update about N.E.U.R.O.N.'s progress. Instead, Dr. Carter's introduction was handled by another member of the N.E.U.R.O.N. steering committee (Dr. Ramos Govette) and the business meeting at N.E.U.R.O.N. was presented by another steering committee member (Dr. Rhodes). Dr. Frye and one of her graduate students (Jason Paris) did make it to the meeting in time to have lunch with Dr. Carter! As this situation illustrates. though, N.E.U.R.O.N can take successfully despite Dr. Frye's absence on occasion, expected or otherwise, as when she in labor with one of her children!

Over its eleven-year existence, Dr. Frye has harnessed the talents of many individuals to participate in N.E.U.R.O.N. Now, Dr. Frye hopes to scale back her role in N.E.U.R.O.N. One way this will be accomplished is through the development of new officer positions. Dr. Frye encourages neuroscientists who feel that they could add to N.E.U.R.O.N. and who have a genuine interest in the training of the next generations of neuroscientists to consider becoming an officer of N.E.U.R.O.N. This represents a hopeful new chapter in the evolving structure of this important conference that has affected the careers of so many neuroscientists-in-training, either through N.E.U.R.O.N. itself or through a similar conference modeled on the N.E.U.R.O.N. concept.



Figure 2. Dr. Cheryl Frye and graduate student, Jason Paris, waiting for a ride to N.E.U.R.O.N. after car trouble.

SUMMARY

Our data from this year's New York City meeting indicate that we are meeting the original and updated goals of N.E.U.R.O.N. First, N.E.U.R.O.N. continues to provide a venue for faculty and trainees to present and discuss ideas about Neuroscience teaching and research. Second, these opportunities have been expanded to include traditionally under-represented groups. Continued innovations will help us meet the goals of N.E.U.R.O.N. and accommodate the ever-changing field of Neuroscience research and training.

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